

### IN THE CLAIMS

Please cancel claims 1-48 and 49-55.

56. (Original) A method for labeling a polynucleotide comprising:  
    contacting said polynucleotide with PEO-iodoacetyl conjugated to a signal moiety  
    under conditions such that the PEO-iodoacetyl will attach to said polynucleotide.
57. (Original) The method of claim 56 wherein said polynucleotide comprises a thiol  
group.
58. (Original) The method of claim 57 wherein said thiol group is at the 5' of said  
polynucleotide.
59. (Original) The method of claim 58 wherein said signal moiety is a biotin.
60. (Original) The method of claim 56 wherein said polynucleotide is a DNA.
61. (Original) The method of claim 56 wherein said polynucleotide is an RNA.
62. (Original) The method of claim 56 wherein said polynucleotide is an mRNA.
63. (Original) A method for labeling a polynucleotide comprising:  
    contacting said polynucleotide with a reactive thiol group to form a thiolated  
polynucleotide;  
    contacting said thiolated polynucleotide with a signal moiety capable of reacting  
with said thiolated polynucleotide under appropriate conditions such that said signal  
moiety is attached to said polynucleotide.
64. (Original) The method of claim 63 wherein said step of creating a thiol group  
comprises contacting said polynucleotide with a gamma S ATP and a kinase.